

BACTERIA IN COFFEE.

Ohio Grocer Convicted of Violating the Pure Food Laws of the State.

Toledo, July 30.—The jury in Judge Meek's court in this city has found James White, a local grocer, guilty of selling adulterated coffee. The prosecution was based on a package of Arbuckle's Ariosa coffee. The State of Ohio, through the Pure Food Commission, prosecuted White. The case was on trial for nearly a month and attracted national attention.

The manufacturers of Ariosa coffee conducted the defense for Grocer White. The best attorneys in the country were retained to defend him but, after a short consultation, a verdict of guilty was returned by the jury. The State of Ohio considers this a big victory. Pure Food Commissioner Blackburn has been waging a warfare on spurious food articles and the department has been very successful.

The complaint of the State of Ohio was that Ariosa coffee was coated with a substance which concealed defects in the coffee and made it appear better than it is. The State charged that this coating or glazing was a favorable medium for the propagation of bacteria.

Prof. G. A. Kirchmaier, of this city, a well-known chemist, was the principal witness for the State. He had made scientific examinations of samples of Ariosa purchased in the open market from Grocer White. He found that each Ariosa berry contained an average of 300 bacteria. Mr. Kirchmaier further testified that other coffees he examined contained fewer bacteria for none at all. He declared that the glazed coffee was not a wholesome food product.

Chemist Schmidt, of Cincinnati, corroborated the testimony of Prof. Kirchmaier. The State did not present further testimony.

The defense, through the Arbuckles, who prepare this glazed coffee, secured some of the most eminent chemists and scientists in the United States to give testimony in their behalf. Prof. H. W. Wiley, of the United States Agricultural Department; Prof. Vaughn, of Ann Arbor University; Prof. Bielle and Webster, of the Ohio State University, were called to defend Ariosa. Dr. Wiley had made a careful examination of the method of manufacturing Ariosa. He told of the 19,000,000 eggs used by the Arbuckles yearly in the preparation of this glazing. On this point in cross examination, the State's attorneys deftly drew from him the information that these eggs might be kept in cold storage by the Arbuckles for a year or two at a time.

The experts who heard Dr. Wiley's testimony were pleased to be able to "catch" so famous a chemist. The doctor at one point in his testimony explained very clearly how it is that the egg put into the coffee pot by the housewife settles the coffee. He said that the heat coagulates the egg, and as it sinks to the bottom of the pot it carries the fine particles of the coffee with it, and thus clarifies the drink. It is the act of coagulation in the coffee pot that does the work. Later on in his cross examination, he had to admit that when the egg was put on Ariosa coffee at the factory, it became coagulated, and as egg cannot be coagulated but once, that the coating on coffee was of practically no value as a "settler" when it reached the coffee pot.

Prof. Wiley acknowledged that the glazing might be a favorable medium for the propagation of bacteria, although he would not testify positively either way because he was not a bacteriologist.

Prof. Vaughn, of Ann Arbor University, also a witness for the Arbuckles, said he found bacteria on Ariosa coffee.

Prof. Bielle, another witness for the defense, found a number of lively bacteria on the Ariosa coffee he examined, and he agreed that glazed coffee surely was a more favorable medium for the propagation of bacteria than unglazed coffee.

The verdict of the jury in this case is of national importance because a great many other states have Pure Food Laws like that of Ohio, and it is natural to suppose that similar action will be taken by other Pure Food Commissioners to prevent the sale of glazed coffees.

Pure Food Commissioner Blackburn says: "The State is very much elated over its victory against this big corporation. We are now considering the advisability of informing every grocer in the State of Ohio that it is an infraction of the laws to sell Ariosa, and at the same time give warning to consumers that the coffee is an adulterated food article."

—The prettiest little money or jewel bags are small, about the size of a rather large change purse, in silk on the outside, pale blue or pink, with ribbons to tie them around the neck, of a color to match, and lined with chemis. They are inexpensive.

VIRTUES OF THE ONION.

It is with the onion as with the lemon. Its devotees regard it as a panacea for a good many ills and as a preventive of many of the disorders to which flesh is heir.

The onion is really a very ordinary vegetable, but there is one point which distinguishes it, and that is the somewhat high percentage of sulphur it contains. Possibly the virtues ascribed to it depend on the presence of this element.

Like the lemon, the onion may lay claim to antiseptic properties—that is, to qualities which render it a preventive of seamy. Its mineral constituents include a proportion of potash salts, and probably its antiseptic qualities depend upon these latter compounds.

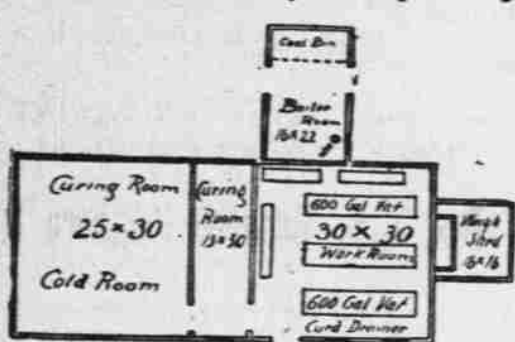
The onion is doubtless a healthful enough vegetable, but its supposed sleep-producing powers are said to be mythical. The virtue of onion juice as a remedy for the stings and wasps' attacks is conceded. In the cottager's repertoire of "first-aid" expedients, onion juice, rubbed on the sting, represents the ammonia of a more advanced stage of domestic medicine.



IDEAL CHEESE FACTORY.

Manager of a Pennsylvania Establishment Tells How It is Arranged and Conducted.

The new cheese factory in Crawford county, Pa., is 30 by 68 feet in size, double boarded and papered on the outside, with a cement floor. The workroom is 30 by 30 feet, with a slanting floor that falls about 4 inches in 26 feet, while the other 4 feet slants to it, forming a gutter for all slops to run off. There are two curing rooms. The small one is papered and ceiled on the inside. In this we put our new cheese for 8 to 12 days, after which they are moved to room No. 2, which we call the cold room. This room was sheathed on the inside, papered on the outside, put on 2 by 2 inch pieces up



FLOOR PLAN OF CHEESE FACTORY.

and down, papered on those, then ceiled over the paper, thus making two air chambers, one of 4 inches and one 2 inches. It was ceiled and papered overhead and filled with sawdust level with the joists.

Two 12-inch ventilators run from the ceiling up through the roof. The windows in this room are of two thicknesses of glass. There are also two small openings in the wall in opposite corners, to allow cold air to come in when the night is cooler than the day. Last fall when the thermometer stood for several days above 90 degrees in the shade, we never saw it above 76 degrees in this room. This spring we put in a cold air duct.

The cheese are placed on a truck as they are taken from the presses and pushed to the curing rooms. The whey is pasteurized as soon as drawn and kept in tanks covered with boards and roofing paper. Some of our patrons say that the value of the whey was doubled by pasteurizing.

The building sets on a tile foundation, built high enough so no boards touch the ground. It is covered with an asbestos roofing. We use no hoisting crane to unload, as the cans are dumped over a saddle from the wagons. The upper story over workrooms is used for boxes, workshop, etc.—Orange Judd Farmer.

HAY IN THE STACK.

How It Can Be Measured with a Degree of Accuracy Sufficient for Ordinary Purposes.

Several correspondents have written for a certain method of measuring hay in the stack. Here is one that is said to be quite correct, but who first formulated it we are unable to say: Measure the stack for length, width and the "over." To get the "over" throw a tape line over the stack at an average place, from ground to ground, drawing it tightly. Multiply the width by the over and divide this result by four; multiply result of division by the length for approximate cubical contents of stack. To reduce to tons: For hay that has stood in stack less than 20 days, divide cubical contents by 512; for more than 20 and less than 60 days, divide cubical contents by 422; for more than 60 days, divide cubical contents by 350. For instance, take a stack which measures 17 feet wide, 58 feet long and 36 feet over. Stack has stood 15 days. Multiply 17 by 36, equals 612. Divide 612 by 4, equals 153. Multiply 153 by length 58, equals 8,874, which gives the cubical contents in feet. Divide 8,874 by 512, equals 17.3 tons in stack.

In the hay the rule is to multiply the length, width and height of the bay, or the hay, together, and then divide the total by 350, the supposed number of cubic feet in a ton of good timothy after it is well settled. Thus a bay 30 feet long, 15 feet wide and 15 feet high would contain 12 tons and 1,500 pounds. Of course these measurements are only approximate, and the actual results will show slight variations either one way or the other. There is no rule that can be absolutely correct.—Washington Farmer.

Grasses for Dry Weather. Experience during recent dry summers strongly emphasizes the chief weakness of blue grass—its almost entire failure to grow during dry weather. Orchard grass has been found best of the ordinary grasses in this respect, but the common red clover has shown its superiority to any of the smaller grasses for either hay or grazing in dry years. Highly prized as are the old blue grass pastures, it seems clearly proved that a greater quantity of food would be produced by putting them under a rotation, with clover and clover the chief crops. This would involve more labor, but in present conditions would give better prospects of profits, said the late Prof. G. E. Morrow.

Worst Enemies of Butter. Two of the strongest enemies of butter to-day are oleomargarine and the preservatives. Both are of the same general character, for they depend on the greed of men for their very existence. Both exist in the darkness and masquerade under other than their true characters. Oleomargarine can be profitably sold only when it is sold for butter. The preservatives are sold by being proclaimed as perfectly healthful drugs. The ignorant and vicious buy the bogus butter products, or at least most of the consumers are ignorant. In either case a dissemination of knowledge is necessary to destroy the enemy.—Farmers' Review.

RASPBERRY CULTURE.

Valuable Suggestions for Those Who Intend to Engage in the Business Next Year.

Select a piece of ground with good surface drainage, facing east or south. The soil should contain a good amount of humus. A good clover sod which had a crop of potatoes taken from it the year before planting berries, would be my ideal. During winter or in early spring give it a liberal dressing of stable manure—about 8 to 12 tons per acre. Plow under in early spring but be careful not to plow when the ground is too wet. I prefer plowing 7 or 8 inches deep.

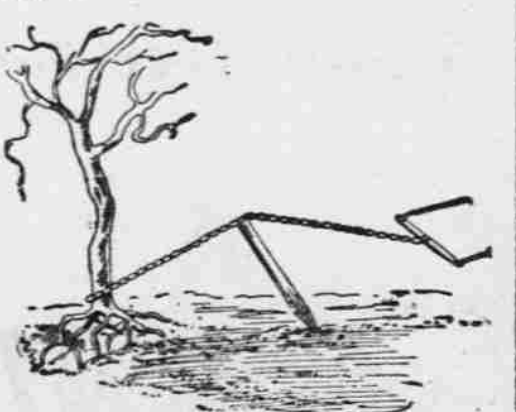
Pulverize ground thoroughly; mark out with single shovel plow about 5 inches deep; rows 3 1/2 feet apart. Plant every other row to potatoes, then plant your berries in the remaining rows. Now we want good thrifty, well-rooted plants. When we have to purchase them or have to transport a considerable distance we want them in a dormant state, but when plants can be got on an adjoining plantation I prefer to have plants well started, say tops 6 inches high, taking them up with all the soil that will adhere to roots, only taking about 3 or 4 dozen at a time and planting them 3 feet in row, running the shovel plow through the row just before planting so the soil is fresh and moist. As soon as they are set start the cultivation to form an earth mulch and arrest the evaporation from the surface of moisture brought up by capillary attraction; also to kill all weeds. Keep cultivating all summer and keep clear from weeds. The potato crop will pay for the work and the use of the land. Do not prune the first season. In the following spring prune the laterals back to 10 or 12 inches. After fruiting remove all old canes, and all new canes except 3 or 4 of the strongest, in August or September.

I take one horse to a breaking plow and plow the soil up to the row of plants, forming quite a ridge. The reason I do this is, it braces up the plants and keeps them from being blown over; also it drains the surface water from the plants and keeps them from heating out the following spring. I prune all laterals back to 8 or 10 inches. The reason of so close pruning is it preserves the vitality of plants. Also it makes them set less fruit, but it will be of finer and better quality and just as many quarts. I cut the top bud out of all canes when 2 1/2 feet high so that they will form laterals. After the second year cultivate with a double shovel plow and five-tooth cultivator. My first plantation has fruited four crops and this spring has a fine set of canes for fifth crop and from appearances will produce paying crops for three years or more in the future. I attribute this success to close pruning.—George Wyler, in Ohio Farmer.

PULLING GRAPEVINES.

Chain Trace Worked by One Mule Does the Work Neatly and in Less Than No Time.

Owing to a change in the plans of a fruit farm in a neighboring county, it became necessary to pull up two acres of a vineyard. The owner ordered his men to grub out the vines. They went at it with spade, ax and grubbing hoe, and at the end of the first half-day had only a few vines out. At that rate



CHAIN TRACE IN OPERATION.

they had a week's hard work on hand. A Yankee neighbor happened to visit the farm, and after watching the men for awhile told one of them to go to the barn and harness a mule and bring him with a ten-foot chain. Then he set the men to digging around the vines and cutting the main roots. When the mule and chain came he made a half-hitch with the chain around a vine near the ground, and attached it to the mule's whiffletree. Then he took a piece of 2x4 about four feet long, placed one end on the ground and the other under the chain, leaning at an angle of 45 degrees toward the vine. The mule was started and the vine lifted out of the ground. The chain was unfastened and hitched to the next, and so on. The whole job was done with the mule, and was an easy and speedy one. The same plan will work with all grubbing where the roots are not too large. Fence posts can also be pulled up in the same way.—Orange Judd Farmer.

New Field for Research.

The world of horticulture is a mysterious one, and in it are many secrets yet to be found out. We have considered that the question of maternity belongs to living and breathing animals. But we are now awaking to the fact that we must consider maternity in the vegetable world. As scientists investigate, the wonder grows. Not only are there self-sterile varieties among grapes, plums and pears, but among the apples self-sterility exists to a great extent. More than that, varieties have been discovered that have no affinity toward each other and if planted together will produce no fruit. This presents a new field for investigation and research.

Forestry Bureau Planned.

Secretary Hitchcock is preparing to organize a forestry bureau in the interior department to carry out an extensive system of reforestation, somewhat on the plan successfully pursued in Germany. The agricultural department is now sending a man to the rice-growing countries of the east. A scientist who has recently returned from Japan brought specimens of rice so much more suitable for the gulf coast than what we formerly had that we are now producing most of the rice needed here.

Digging Oil from the Ground.

Not all Americans know it, but petroleum was produced in Scotland long before it was found in the United States. In Scotland it is got from a shale rock, and is not found in a liquid state at all. For many years the mining and refining of this shale was a vast industry. It is still important, but as American refined oil can be sold cheaper in Scotland than the product of that country, there has been a great falling off of the Scottish product. The Scotch shale is black, and is found 400 feet below the surface in a region known as the oil fields of West Calder, between Edinburgh and Glasgow. Paraffin wax, ammonia and lubricating oil, in addition to illuminating oil, are made from the crude oil or tar that is got from the shale by crushing.—Chicago News.

Mysterious Timbuctoo.

"Timbuctoo the Mysterious," as revealed to the modern world by M. Felix Dabois, the French explorer, who is the first white man to return with a definite account of this strange realm of the Niger, proves to be the most romantic spot of the Dark Continent. Behind the ramparts of Saharan sands has nestled throughout all these centuries a hidden civilization that can trace its beginnings back to the old Mohammedan days of glory for Africa. Jenne, too, "the jewel of the valley of the Niger," after which the whole Guinea coast has been named, preserves an even older civilization—that which flourished in the Nile valley ere the fanatical Arabs drove native races of Songhai thence.—Philadelphia Record.

The First Railroad in America.

Gridley Bryant, a civil engineer, in 1826, projected the first railroad in the United States. It was built for the purpose of carrying granite from the quarries of Quincy, Mass., to the nearest tidewater. Its length was four miles, including branches, and its first cost \$30,000. The sleepers were of stone and were laid across the track eight feet apart. Upon rails of wood, six inches thick, wrought-iron plates, three inches wide and a quarter of an inch thick, were spiked. At the crossings stone rails were used, and as the wooden rails became unserviceable they were replaced by others of stone.—Ladies' Home Journal.

Equal to the Occasion.

A lady came home from the theater the other evening and found Mary, the servant, sitting in the kitchen reading a book by the light of two candles. She was very naturally annoyed at the girl's extravagance.

"Why, Mary," she said, "actually reading novels with two candles burning?"

"Not at all, ma'am," was the cool reply. "That's only one candle. I just cut it in two half an hour ago."—Spare Moments.

Good Weight.

"If I understand you rightly you called that cake we had for dinner pound cake?"

"Yes, Why?"

"Oh, nothing; only it occurred to me after I ate it that you might have cheated yourself."

The lady made no reply at the moment; but in the silent watches of the evening she telephoned the butcher to make it a round steak instead of a porterhouse.—Detroit Journal.

A Confused Recollection.

"Yes," said Mr. Cumrox, "my youngest daughter will be through school in a short time. She is already making her preparations for commencement day."

"What are they?"

"I don't know that I followed her description very intelligently, but my impression is that they have something to do with the immortality of genius in plain white and the neck filled in with chiffon."—Washington Star.

Cocoon Butter.

The manufacture of butter from cocoanut milk at Amilly, in France, has recently attracted considerable attention from French scientific journals. It is asserted that chemical analysis shows that cocoanut butter, when properly made, is an excellent article of diet. The price is cheap, and "Amilly butter" is not only sold in France, but is exported to Germany.—N. Y. Sun.

A Hard Case.

Judge—Have you anything to say, prisoner?

Prisoner—Yes. I'm engaged to be married. I've been engaged for the last ten years.

"Why weren't you married?"

"Because we've never been out of jail together. She comes out to-morrow."—Trifles.

A Clubman.

Little Willie—Ma, is pa your steady? Mamma (somewhat shocked)—Why do you ask a question?

"I thought he must be," cause I notice that he comes here to see you two or three times a week and for an hour or two on Sunday, just as the cook's beau does, and he's her "steady," she says.—N. Y. World.

THE MARKETS.

New York, July 30.	
CATTLE—Native Steers	4 50 @ 5 75
COTTON—Middling	15 1/2 @ 16
FLOUR—Winter Wheat	2 30 @ 2 50
WHEAT—No. 2 Red	1 15 @ 1 17 1/2
CORN—No. 2	67 1/2 @ 68 1/2
OATS—No. 2	25 @ 26
PORK—Mess New	15 50 @ 16 50
ST. LOUIS.	
COTTON—Middling	14 1/2 @ 15
BEEVES—Steers	4 40 @ 5 00
CALVES—Cows and Heifers	2 50 @ 3 00
HOGS—Fair to Choice	5 00 @ 5 50
SHEEP—Fair to Choice	4 00 @ 4 50
FLOUR—Patents	3 40 @ 3 80
Other Grades	2 80 @ 3 20
WHEAT—No. 2 Red	1 15 @ 1 17 1/2
CORN—No. 2	67 1/2 @ 68 1/2
OATS—No. 2	25 @ 26
RYE—No. 2	60 @ 62 1/2
TOBACCO—Leaves	14 00 @ 15 00
HAY—Clear Timothy	1 50 @ 1 60
BUTTER—Choice	24 @ 25 1/2
BACON—Clear Rib	10 @ 11
EGGS—Fresh	15 @ 16 1/2
POULTRY—Standard	10 @ 11 1/2
LARD—Choice Steam	8 @ 9 1/2
CHICAGO.	
CATTLE—Native Steers	3 25 @ 5 50
HOGS—Fair to Choice	4 50 @ 5 00
SHEEP—Fair to Choice	4 25 @ 4 50
FLOUR—Winter Patents	2 40 @ 2 50
WHEAT—No. 2 Spring	67 @ 68 1/2
CORN—No. 2 Red	67 @ 68 1/2
OATS—No. 2	25 @ 26
PORK—Mess New	15 50 @ 16 50
KANSAS CITY.	
CATTLE—Native Steers	4 50 @ 5 50
HOGS—Fair to Choice	4 50 @ 5 00
WHEAT—No. 2 Red	67 @ 68 1/2
CORN—No. 2	67 @ 68 1/2
OATS—No. 2	25 @ 26
NEW ORLEANS.	
FLOUR—High Grades	50 @ 60
CORN—No. 2	60 @ 65
OATS—No. 2	25 @ 30
HAY—Choice	17 1/2 @ 21 1/2
PORK—Standard Mess	15 50 @ 17 1/2
BACON—Short Rib Sides	8 1/2 @ 9 1/2
COTTON—Middling	15 1/2 @ 16
LOUISVILE.	
WHEAT—No. 2 Red	70 @ 72 1/2
CORN—No. 2	61 @ 62 1/2
OATS—No. 2	25 @ 26 1/2
PORK—New Mess	15 1/2 @ 16 00
BACON—Short Rib	8 1/2 @ 9 1/2
COTTON—Middling	15 1/2 @ 16

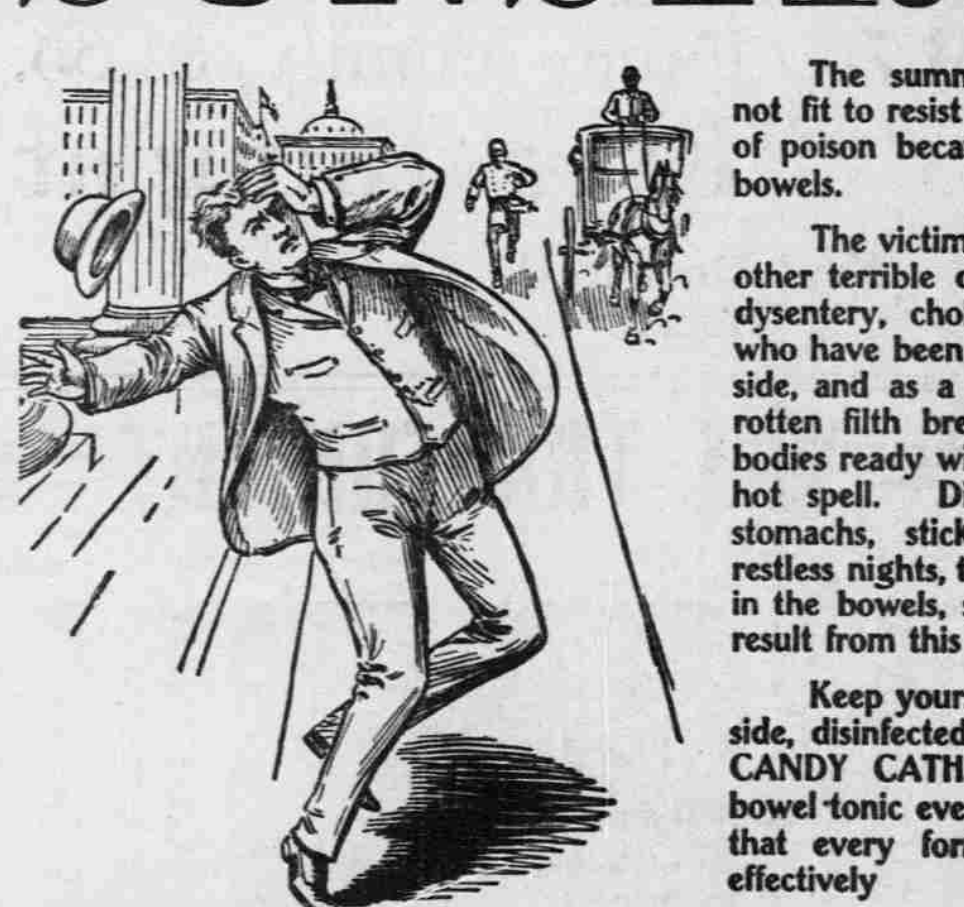
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